AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for manufacturing half-tone phase shifting mask blanks each having a phase shifting film containing at least one half-tone film on a transparent substrate,

comprising the step of providing a target containing a metal and silicon, and carrying out reactive sputtering in an atmosphere containing a reactive gas, to form said half-tone film on said transparent substrate,

wherein the formation of the half-tone film by said reactive sputtering is carried out using, as said target, a target having a metal/silicon compositional ratio selected so as to give a ~~predetermined optical property~~desired phase angle and transmissivity of the half-tone film, at a reactive gas flow rate selected from a region where a reactive sputtering discharge ~~characteristic is stabilized against~~voltage or discharge current does not show a substantial change with regard to a change in the flow rate of the reactive gas.

2. (Currently Amended) A process for manufacturing a plurality of types of half-tone phase shifting mask blanks each of which has a phase shifting film containing at least one half-tone film on a transparent substrate, the half-tone film of each blank having a different optical property,

comprising the step of providing targets containing a metal and silicon and carrying out reactive sputtering in an atmosphere containing a reactive gas, to form said half-tone film on said transparent substrate,

wherein the formation of the half-tone film by said reactive sputtering is carried out using a target selected from a plurality of targets having different metal/silicon compositional ratios so as to give desired different ~~half-tone film optical properties~~phase angles and transmissivities among the mask blanks, at a reactive gas flow rate selected from a region where a reactive sputtering discharge ~~characteristic is stabilized against~~ voltage or a discharge current does not show a substantial change with regard to a change in the reactive gas flow rate.

3. (Previously Presented) The process of claim 1, wherein the reactive gas is at least one member selected from the group consisting of nitrogen, oxygen, fluorine and compounds of these.

4. (Previously Presented) Half-tone phase shifting mask blanks manufactured by the process recited in claim 1.

5. (Currently Amended) Half-tone phase shifting masks manufactured ~~from~~by patterning phase shifting films in the half-tone phase shifting mask blanks recited in claim 4 to form mask patterns.

6. (New) The process for manufacturing half-tone phase shifting mask blanks as recited in claim 1 or 2, wherein the metal/silicon compositional ratio of said target is selected from a region where said target has a silicon content of 70 to 95 mol%, to obtain desired optical properties of the half-tone film.

7. (New) The process for manufacturing half-tone phase shifting mask blanks as recited in claim 1 or 2, wherein the metal/silicon compositional ratio of said target is selected from a region where said target has a silicon content of 85 to 95 mol%, to obtain desired optical properties of the half-tone film.

8. (New) A method of determining optimum conditions for forming a half-tone film in the manufacture of a plurality of types of half-tone phase shifting mask blanks which are for a plurality of wavelengths for exposure or which have different transmissivities, by carrying out reactive sputtering in an atmosphere containing a reactive gas using a target containing a metal and silicon, to form a phase shifting film containing at least one half-tone film on a transparent substrate,

wherein the formation of the half-tone film by said reactive sputtering is carried out using, as said target, a plurality of types of targets whose metal/silicon compositional ratios are selected such that half-tone films having desired different phase angles and transmissivities are obtained, at a reactive gas flow rate selected from a region where a reactive sputtering discharge voltage or discharge current value does not show a substantial change with regard to a change in the flow rate of the reactive gas.

9. (New) The method of determining optimum conditions for forming a half-tone film as recited in claim 8, wherein the metal/silicon compositional ratios of said targets are determined in a region where said targets have a silicon content of 70 to 95 mol%, to give desired optical properties of the half-tone film.

10. (New) The method of determining optimum conditions for forming a half-tone film as recited in claim 8, wherein the metal/silicon compositional ratios of said targets are determined in a region where said targets have a silicon content of 85 to 95 mol%, to give desired optical properties of the half-tone film.

11. (New) A process for manufacturing half-tone phase shifting mask blanks, which comprises forming a phase shifting film containing at least one half-tone film on a transparent substrate under conditions determined according to the method recited in claim 8.

12. (New) A process for manufacturing half-tone phase shifting masks, which comprises patterning the phase shifting films of the half-tone phase shifting mask blanks manufactured by the process recited in claim 11, to form mask patterns.

13. (New) The process of claim 2, wherein each of the mask blanks produced has a transmission variation of no more than ±0.4%.

14. (New) The process of claim 2, wherein each of the mask blanks produced has a phase shifting amount variation of ±4°.